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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,941	01/25/2002	Daniele Venturini	213653	8712

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LEYDIG VOIT & MAYER, LTD  
TWO PRUDENTIAL PLAZA, SUITE 4900  
180 NORTH STETSON AVENUE  
CHICAGO, IL 60601-6780

EXAMINER

PHILOGENE, PEDRO

ART UNIT PAPER NUMBER

3732

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/937,941

Applicant(s)

VENTURINI, DANIELE

Examiner

Pedro Philogene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 03. 6) ☐ Other:

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "in particular" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 6, lines 1,2, the term "the facing walls" lacks prior antecedent basis.

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In claim 8, line 2, the term "for about" is vague; therefore renders the claim indefinite.

In claim 9, line 1, the term "the height" lacks prior antecedent basis.

In claim 10, line 1, the term "said height" lacks prior antecedent basis.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: in claim 1, line 1, the word "improved" should be removed, also in line 2, the term "of the type" should be removed. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gustilo (4,463,753) in view of Grossberndt (4,544,313).

With respect to claim 1, Gustilo discloses a bone screw for use in orthopaedic surgery, which comprises a head (11, FIG.3) a shank (3, FIG.2) and a threaded portion (2, FIG.2) tapering towards a tip, as best seen in FIG.2, at the opposite end from the end (11, FIG.2) wherein the thread portion (tapering towards the tip) has at least one constant pitch section, as set forth in column 5, lines 6-7, comprising threads with an acute angle, as set forth in column 5, lines 32-54; or cusp-like triangular profile in cross section; as best seen in FIG.2.

It is noted that Gustilo did not teach of threads that are separated from each other by a shaped bottom land having a concave profile defined by two counter-sloping planes; as claimed by applicant. However, in a similar art, Grossberndt evidences the use of a screw with threads that are separated from each other by a shaped bottom land having a concave profile defined by two counter-sloping planes to create surfaces to allow material that is being removed to slide during threads penetration, as a result the supporting force is increased, thereby releasing stress on the material.

Therefore, given the teaching of Grossberndt, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the special shape of the of the bottom land of Grossberndt in the device of Gustilo to create surfaces to allow material that is being removed to slide during threads penetration, as a result the supporting force is increased, thereby relieving material stress or, in this case, bone stress.

With respect to claims 2, 3, 4, 6, 7, Grossberndt teaches all of the limitations, as set forth. An obtuse angle of 120 degree (since applicant's specification stated that the obtuse angle is in the range of 120 to 150 degrees, therefore, the angle could only be at least 120 degrees and the most 150 degrees); the facing wall or shaped bottom land having an acute angle in the 15 to 30 degrees range, column 3, line 1; and as best seen in FIGS. 1,2.

With respect to claims 5, 8,9,10, it is noted that the above combination of references did not teach of a screw having constant pitch of 1.25mm or a threaded portion one third the length of the screw or the height of the threads three fifths the pitch

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length wherein the height is 0.75mm; as claimed by applicant. However, applicant fails to establish the criticality of such dimensions and whether the limitations asserted in these claims are disclosed as critical, and if so, whether the invention disclosed in each claim, so limited; the examiner believes that any dimensions could have been used, since the device would have performed equally as well with any given dimensions.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,505,736	4-1996	Reimels et al.
5,544,993	8-1996	Harle
5,643,269	7-1997	Harle

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro Philogene whose telephone number is (703) 308-2252. The examiner can normally be reached on Monday to Friday 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P Shaver can be reached on (703) 308-2582. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 305-3591 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Pedro Philogene  
November 19, 2002

  
PEDRO PHILOGENE  
PRIMARY EXAMINER